

Day 1 (12-16-2013) Findings

1) Unreported dry weather overflow 3/26/2013 - 3/7/2013

WHDT
CSO 012
MARCH 2013
Section 9(1)(a) "Dry weather overflows prohibited": "Any other discharges
... constitutes bypass." Reporting according to Section 8 of Perm.
(2hr-verbal)
(5 day-written)

2) Not notifying Commissioner of changes to/ removal of outfalls
IN A CLEAR & DIRECT MANNER

NO POLICY FOR DRY WEATHER OVERFLOWS (10 NMC)

3) No definition or application for distinguishing dry weather vs.
wet weather overflows "

NMC.

4) Proper operation + maintenance for CSO regulators + outfalls and tide gates
- rely on informal information from CSL (third-party)

5) Contract operator not implementing SSORP (e.g. sand traps)

6) Proper O+M for manhole cleaning (e.g. process ^{assessment /} ^{swab} 25% of manholes over 4 yrs.)

7) Proper O+M - Pump station/evaluation + assessments.
Force Main/Siphons

8) No NMC plan or program (e.g. NMC #3 IPP)
floatables

9) Do not have adequate FOG program enforcement, no FOG MAN
NO TECHNIQUES

10) CMOM program states ^{entire} ^{sewer} system cleaning at least annually; however, GNAUPCA
conducts entire ^{sewer} system cleaning ~~every~~ every 3 yrs.

11) Lack of adequate asset mgmt/condition assessment program

12) "hot spot" list -- removal from list to max. flow + root cause assessment

11-21-2013

13001.301.04 RI New Haven CSO

Conf. call @ 8:30 AM
(MST)

Attendees: Neil Handler (EPA), Jack Melcher (EPA)

[AF]

- PG to provide agenda with time frames

- Typical schedule times 8AM - 4:30 PM

- Personnel readily available

- EPA to provide notice early next week to ~~GRNHWPCA~~ [REDACTED]

[AF]

- EPA to investigate CSO provisions

- ST consent order? (LTCP, Affordability)

[XII]

- FTP instructions to EPA

- Hotel arrangements

3001.301.04 RI New Haven CSO Conference Call

12-12-2013
@ 1:00 PM (MST)

Attendees: Jack de Neil (EPA RI), Ward (PC), ~~Graig~~ (PC)

cell: 413-627-2910 cell: 978-998-1496

- O+M-on PS + WWTP to switch from OM → Xynagro Jan. 2014

- on collection system GNHWPCA + contractor for larger scale projects
(e.g. CCTV cleaning)

- Potential issues to consider

- LTCP (not enforceable; options ??)
to evaluate

- CTDEEP states, reliability of reporting robust

- Need for CMOM requirements

- CTDEEP having difficulty with GNHWPCA implementing "CO"

Jan. 2011 - year-to-date 2013

Period of Review

(Cont. on back)

11-15-2013

13001.301.04 R1 New Haven 14

Jack Melcher (EPA R1)
Neil Handler (EPA R1),
Mike Wagner (Attorney)

Kick-off call meeting with Wes (PG), Craig (PG), Jared (PG), Neil Handler (EPA R1), Mike Wagner (Attorney)

Inspection dates: December 16-18, 2013

Background - New Haven & several other communities

Inspection scope/focus: CSO implementation of NMCs - SSO

- 20K

- No MS4: LTCP implementation not a priority for EPA; No WWTP focus

Day 1:

- SSOs

- CTPs, O+M, Response to releases, Accuracy & reliability of reporting

Day 2:

- NMCs

- CSO side

Day 3:

- LTCP

Hospital parking lot flooded by 'supposed' closed SSO.

EPA req'd

Flow monitoring @ CSO outfalls → via 308 request

- 2011

[AT] PG verify

- installed?

@ inspect

- operational?

- maintenance?

- accuracy?

CSO NMC provisions

obtain

Obtain examples

Large # reported SSOs

Condition assessment of assets

[AT]

PG verify

@ inspect

- pump stations

- aux. power

- redundancy

G/S Assess Map

collection system, PS, WWTPs

Obtain

• Annual Rpts (not including WWTPs)

Contract operator for O+M = OMI

- access to personnel + records

PG mock schedule of activities

Enforcement matters (CT consent order)

LTCP + updates

[AT]

Obtain

Obtain

1.2-16-2013

Permittee: Greater New Haven WPCA
(GNHWPCA)

NPDES Permit #: CTO100366

13001.301.04 EPA Region 1 - New Haven, CT CSO/SSO Inspection

- ✓ • Introduction Sid Holbrook, Gary Rotick, Bruce Kirkland
- ✗ • Credentials
- ✓ • Scope of inspection/agenda
- ✓ • Record Request
- ✓ • Sign-in sheet

GNHWPCA System Overview & Background

- Organizational Structure / Contract Operator(s)
 - New Haven, East Haven, Woodbridge, Hamden communities
 - CH2M Hill + OMI contract operator for hydraulic portion
 - Synagro contract operator for solids handling
 - 2005 regionalization of East Haven, Woodbridge, Hamden
 - FOG program implemented by OMI contract IPP org.
 - ~~OMI~~ operates & maintains collection systems & pump stations
 - OMI contract (15 yr). expires Jan. 3, 2014; GNHWPCA to take back all operations
 - except for solids handling to stay with Synagro
 - GNHWPCA to add subcontractors for cleaning, inspections, etc.
- East Shore WWTP
 - 29 MGD avg.; 40 MGD 2^o design flow
 - 100 MGD wet weather 10^o
 - upgrades: (100 MGD to 187 MGD); New electrical, aux. power, sludge storage/thickening
 - proposed full 2^o trt @ 60 MGD (prev. 40 MGD)
- Collection system
 - 560 miles total (70 miles 12.5% combined)

12-16-2013

(14 active, 4 closed)

* [AI] →

- 18 permitted CSOs discharge to - New Haven Harbor, Quinnipiac River, Mill River, West River CSO
- 24 regulators (19 active, 5 closed) "closed" - full concrete / design odds?

- City of New Haven owns, operates, maintains separate storm sewers
- GNHWPCA owns combined at mainline connection not @ CB
- GNHWPCA Major Facilities:

- Bowditch PS → 36" DIP FM → East St. PS

- CH2MHill to conduct study (next 6 mos.) on capacity along Mill River CSOs for maximization of flow in current system
- 2yr 6 hr storm = 2.05"

- CSL Services provides CSO flow meter services

- 2005 Regionalization based on finances, tasks, ownership of communities + systems, no policies involved (e.g. schools vs. trt plant upgrade); connection fees, improved inspection, CMOM

- LTCP revisions based on "Affordability Analysis" - not yet approved; updated plan (2015)
approved by 2016

- CH2MHill bid document for LTCP update

- East Haven + Hamden have I&I issues; low-lying communities

- GNHWPCA conducting \$5 million / yr. for lining + pipe replacement from CT DEEP CWF funding.

- CMMS - Maintenance connection

- Sewer Use Ordinance incorporates by reference the 2008 Design Guidelines Manual.

- CIPs FY 2014 - FY 2019 (\$¹¹⁷/₁₇₇ million)

- GIS asset mapping completed 2008

- GIS info/equipment provided to OMI from GNHWPCA

- OMI not met 3yr ^{cyclic} cleaning of entire system

- GIS updates provided to service provider (Langan GIS provider) - adequate for budget.

Positive

■

Significant Structures

- 8 Siphons total
 - GNAWPCA FY2014 contract for siphon evaluations and develop plan/procedures
 - No CSO trt
 - ② • No floatables/debris control within system or receiving waters
 - 2700 catch basins (complaint/reactive)
 - ↳ covered in 3yr cycle by City of New Haven
 - All combination manholes/cross connections collected.
 - No constrained SSOS
-
- After regionalization interviews conducted with City of New Haven staff to identify hot spot and other system pertinent information.

④

- No comprehensive asset management program for future; more reactive for problem areas
 - How much of system has been CCTV?
- ①)
- 1) - unknown
 - 2) - OMI contract does not have CCTV contract requirements.
- ②
- CIP lining process utilized
 - ILT study completed in New Haven 2009; 2011 - Woodbridge
 - Hampden ILT study (completed by City)
Hampden

Clearing of sewer system (OMI contract)

⑤

- SOPs

- 1 vac; 2 ^{vac} jetters; 1-jet (owned by GNAWPCA; operated/maintained by OMI)
- every Syrs. (Note contract 3yr req't)
System-wide

II

- New contract (4 yrs. 25% cleaned large/small)

6% each yr.

- 177 areas (77 in I&I / LTP areas); (New Haven SS not in PLS) (separated in 1987)

criteria

- max velocity br. 7fps (considered flowing full)
- # overflows over yrs.

Manhole inspections

I

- stick camera (up-line, down-line) Bomed stick camera
- nodes on characterization
- city (brick/block) outside (pre cast)
- program developed in 2012
- 1yr. this coming yr (budget \$60,000)
- rating PACP (1 → 5)
- sediment/solids depth determination by probing (not exact)

Cleaning crews

??

- = (3) 2 man crews

- = 1 crew 50% of time @ hot spots

- = 8-4 shift

→ 88mto/yr.

- sewer cleaning productivity (1000 - 1500 LF/day)

- "hot spots" - gtrly, wldy, annual, bi-annual

"hot spots" = 24.5 miles in system; 96 segments of pipe

- addition/deletion "institutional knowledge" (2000 ft. long segment)

- not contracted in OMI's contract.

- no prioritization for removal or in CIPs

- majority low slope areas in restaurant areas (grease blockages)

build-up

12-16-2013

- Emergency response by GNHPCA subcontractor (2yr. agreement)
 - "urgent" permits obtained via subcontractor (traffic control, etc.)
 - "emergency" permits, etc. obtained in rears
- CMMS - Maintenance connection (generative, work order)
 - (AE) - talk to OMI for process (e.g. sewer/dredge, streets, etc.)
- Pump Station
 - OMI conducts (including repair/replacement)
 - PM work completed by 4-5 staff
 - Full SCADA + alarms at all 30 PS (completed 2007/2008)
 - 1hr. response time in OMI contract.
- 3rd Party eng. firm hired by GNHPCA to evaluate OMI contract compliance.
- Monthly discrepancy mtgs.
- WWTP System Condition Assessment and Capital Program Rpt. (Jan. 2012) by Acadia's
 - covers about 30% of system
- Force mains
 - DIP with cathodic protection
- Approx. 3 yrs ago, GNHPCA conducted assessment of all PS + associated force mains for bypass capabilities (valving, etc.)
 - (test sites)
 - No formal program for force main inspections (e.g. air release, visual, cathodic protection)
 - No known recent failures
- FY 2014 to be addressed with SOPs

12-16-2013

- GNHPCA has 50 miles of easements to maintain
 - backyards, marshes, etc.
 - clearing/maintenance of these ~~easements~~; budget allocation last 2 yrs.
 - approx. 10 miles addressed East Haven, Hamden
 - contractor to clear, unknown when this will be completed.
 - some of these areas are issue areas (T&I, CIP, etc.) "Paradise Avenue" Easement
↓
Identified 2013 (~100 acreage/day)

• Combined system

- prior to rendering @ CSOs + regulators was done visually
 - currently rely on CSL ^{flow} meters (installed June 2012); calibrated by CSL; visualizing
 - stated CSO 5 + 3
- [I]
- determination of "wet" vs. "dry" protocols not developed. (e.g. CSO 12 - March 2013)
↳ not rpt as dry weather overflow
 - rpt. CSO with tidal influence
 - #
- last rpt. dry weather overflow June 2011

- Catch basin cleaning 2005-2008 by OMI; 2008 → City of New Haven.
- all CBs on & freq. + complaints.

• Sand/salt for street infiltration

- No SOPs for tide gates, regulators, weirs, etc.
- Truman tank (40K storage, 5 million gallons)
- No CSO monitoring
- NMC Plan

S.

12-16-2013

Overflow response

- all calls logged
- all dispatchers create work orders
- 20-30/month calls
- after hrs: → call list to operator
- answering service collects calls provide hrs of general info. to
- lyr. response times
 - correct overfill
- field estimate (volume)
- utilize bypass log

Obtain

- SOP response training (annually)
- photographs not typically taken
- Basement backups (OMI uses ServPro)
- New development/redevelopment areas ^{Pip Clean} req'd to have backflow preventers.
- Overflow estimates + procedures (March 8, 2011) - visual/measured volume
SOPs
-

✓ Obtain for
W.O. #34
CSO

Field activities

- 031?
- CSO ~~007~~
 - CSO 012
 - CSO 016

12-17-2013

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• Select Field Sites

- 1) Truman Tank ✓
- 2) West River pipe
- 3) CSO Regulator 003
- 4) CSO 031; CSO 034; CSO 012; CSO 016
- 5) Boulevard PS ✓
- 6) East Street PS ✓
- 7) State & Union PS

✓ • Introduction

✓ • Scope + agenda

✓ • Sign-in sheet

CMMMS (Maintenance Connection) 2010-2013

- I
- ~~47~~ 20th Open Collections "COLL" V.O. = 329 (16-2010; ; 75-2012)
 - Prioritization defaulted by work code (1-5)
- II
- SOPs + field forms not utilized by field crews (unaware of SSOPP)
 - Rich (collections lead operator) handles reporting based on field crews verbal info. for overflow information. Field crews do not get W.O. form
 - Lack of transparency for W.O. generated by call center operators / GMPA staff. and close-out
 - Institutional knowledge for field estimate for volume
- III
- Lack of SOPs for CMMMS entry, coding, etc.
 - Every sewershed is PM cleaned every 5 yrs.

12-17-2013

Field Visits

East Street PS

- Previously old primary treatment plants
- (2) New bar screens ~ 3 units ago
- I 2 of 4 grit channels operational (#3 + #4 offline)
- Rain events always cause maid. of chain driven grit chambers.
 - no scheduled replacement per Tom.
- 10 MGD (avg) 34 MGD peak.
- Dry weather (1-screen, 2 grit chambers)
- Grit channel are SCADA, but must be manually activated.
- P.S. cleaning twice/week
- Bubbler level control high, low,
- 1300 kW aux power (^{excuse} run weekly); last utilized Oct. 2012
 - 8 H filters changed?
 - PM? Hard to find anyone to work on it.
- CSO Regulator 21 viewed with flow meter
- CSO outlet #21 w/ ^{never} tide gate observed.

* *
sewer backup from Hampden PW
call @ 11:30
to rich's mobile
than dispatch

Hampden Public Library Backup Response

- Came out in truck on-site @ 12:05
 - jetted line, completed 12:35 PM
 - No spill kits on trucks
 - No formal training on field estimate volumes per Rich

II

III

12-17-2013

Boulevard PS.

- 10 MGD avg, 30 MGD peak
1300 kW
- ~~1 Megawatt~~ aux. power Magna Max generator (Kawasaki)
- RDP Grit chamber (A)
- New bar screens (began ~ Oct. 2013)
- View PM schedule
- Spill kit on site.
- Duperon flex ring screens
- 8.8 MGD Flow out of station
- 1 of 4 RAH pumps.

E I • 1 online; 3 offline mechanical!

CSO 024

- visited; signage observed

Interceptor

- viewed @ Greenwich and Sea st.

Townsend Tank

E I

- No pump redundancy; nor designed for multiple
- No aux power hook up, readily available.

CSO 031 Regulator

- visited, confirmed retaining

CSO 034 Regulator → CSO 0025 (unique wood weir structure adjacent to storm drain system)

James Street Siphon

E

- 2 screens, 3 pipes, CSO Outfall 015

- signage not adj.

12-18-2013

13001.301.04 - EPA R1 - New Haven, CT CSO/SSO Inspection

E

Obtain
PF

- 13 of 30 pump station without aux. power
 - (3) portable 250 khr + (1) 35 khr + (2) trailer mounted.
- pump station emergency response list

Closing Conference to CNHWPRA @ 1:30 PM (EST)

(refer to Craig Blett's notes)

* • Preliminary Findings

O6M

- 1) training materials + manuals
- 2) lack of general procedures for collection system activities
- 3)
- 4) lack of identify new and/or
- 5) procedures, documents, training, for removal of hot spots from PM program.
- 6) lack of easement maint. program
- 7) ineffective use of CMMS W.O. system
- 8) No evidence of large diameter pipe cleaning program in past
- 9) Concerns regarding sewer line cleaning day-to-day activities
- 10) PS conditions (maint., housekeeping)
- 11) Aux. power + redundancy of pumps, etc.

Reporting + Recordkeeping

- 1) Identified SSOS
- 2) Evidence of unreported DWOs from combined systems
- 3) SSOS not reported in 2hr. time frame
- 4) SSOS reported beyond 2hr. time frame (> 17 beyond 2hr. - Hampden - New Haven)
- 5) Customer service request review - potential unreported SSOS